Title of Instructional Materials: Cord: Algebra 2

Grade Level: Algebra II

Summary of Cord: Algebra 2

Overall Rating: ☐ Weak (1-2) ☒ Moderate (2-3) ☐ Strong (3-4) **Summary / Justification / Evidence:** Missing standard is A-APR.4 (it is stated in the review material that they are trying to develop a lab for this standard, but the author states "will require quite a bit of research to get at what the standard is intending", F-IF.7c, F-IF.9, S-IC.3, S-IC.5	Important Mathematical Ideas: ☐ Weak (1-2) ☒ Moderate (2-3) ☐ Strong (3-4) **Summary / Justification / Evidence:** Not much with respect to investigation or real world connections. Developed independently of one another.
Skills and Procedures: ☒ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4) **Summary / Justification / Evidence:** Many instances of just "show me the skill" type problems and not well integrated problems.	Mathematical Relationships: ☐ Weak (1-2) ☒ Moderate (2-3) ☐ Strong (3-4) **Summary / Justification / Evidence:** Several were not developed well or only mentioned with little or no discussion.

1. Make sense of problems and persevere in solving them.	
Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.	
Indicate the chapter(s), section(s), and/or page(s) reviewed:	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
Summary / Justification / Evidence:	**Overall Rating**: ☐1 ☐2 ☒3 ☐4

2. Reason abstractly and quantitatively.	
Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits o creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.	
Indicate the chapter(s), section(s), and/or page(s) reviewed:	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
Summary / Justification / Evidence:	**Overall Rating**: ☐1 ☒2 ☐3 ☐4

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Indicate the chapter(s), section(s), and/or page(s) reviewed:	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
Summary / Justification / Evidence:	**Overall Rating**: ☐1 ☐2 ☒3 ☐4

4. Model with mathematics.	
Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicatedsituation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.	
Indicate the chapter(s), section(s), and/or page(s) reviewed:	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
Summary / Justification / Evidence:	**Overall Rating**: ☐1 ☐2 ☒3 ☐4

5. Use appropriate tools strategically.	
Mathematically proficient students consider the available tools when solving amathematical problem. These tools might include pencil and paper, concretemodels, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system,a statistical package, or dynamic geometry software. Proficient students aresufficiently familiar with tools appropriate for their grade or course to make sounddecisions about when each of these tools might be helpful, recognizing both theinsight to be gained and their limitations. For example, mathematically proficienthigh school students analyze graphs of functions and solutions generated using agraphing calculator. They detect possible errors by strategically using estimationand other mathematical knowledge. When making mathematical models, they knowthat technology can enable them to visualize the results of varying assumptions,explore consequences, and compare predictions with data. Mathematicallyproficient students at various grade levels are able to identify relevant externalmathematical resources, such as digital content located on a website, and use themto pose or solve problems. They are able to use technological tools to explore anddeepen their understanding of concepts.	
Indicate the chapter(s), section(s), and/or page(s) reviewed:	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
Summary / Justification / Evidence:	**Overall Rating**: ☐1 ☐2 ☒3 ☐4

6. Attend to precision.	
Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.	
Indicate the chapter(s), section(s), and/or page(s) reviewed:	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
Summary / Justification / Evidence:	**Overall Rating**: ☐1 ☐2 ☐3 ☒4

7. Look for and make use of structure.	
Mathematically proficient students look closely to discern a pattern or structure.Young students, for example, might notice that three and seven more is the sameamount as seven and three more, or they may sort a collection of shapes accordingto how many sides the shapes have. Later, students will see 7 °— 8 equals thewell-remembered 7 °— 5 + 7 °— 3, in preparation for learning about the distributiveproperty. In the expression $x2 + 9x + 14$, older students can see the 14 as 2 °— 7 andthe 9 as 2 + 7. They recognize the significance of an existing line in a geometricfigure and can use the strategy of drawing an auxiliary line for solving problems.They also can step back for an overview and shift perspective. They can seecomplicated things, such as some algebraic expressions, as single objects or asbeing composed of several objects. For example, they can see $5 – 3(x – y)2$ as 5minus a positive numbe times a square and use that to realize that its value cannotbe more than 5 for any real numbers x and y.	
Indicate the chapter(s), section(s), and/or page(s) reviewed:	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
Summary / Justification / Evidence:	**Overall Rating**: ☐1 ☐2 ☒3 ☐4

8. Look for and express regularity in repeated reasoning.	
Mathematically proficient students notice if calculations are repeated, and lookboth for general methods and for shortcuts. Upper elementary students mightnotice when dividing 25 by 11 that they are repeating the same calculations overand over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation$(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding$(x - 1)(x + 1)$, $(x - 1)(x2 + x + 1)$, and $(x - 1)(x3 + x2 + x + 1)$ might lead them to thegeneral formula for the sum of a geometric series. As they work to solve a problem,mathematically proficient students maintain oversight of the process, whileattending to the details. They continually evaluate the reasonableness of theirintermediate results.	
Indicate the chapter(s), section(s), and/or page(s) reviewed:	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
Summary / Justification / Evidence:	**Overall Rating**: ☐1 ☒2 ☐3 ☐4

Reviewed By: _____

Title of Instructional Materials: Cord

Documenting Alignment to the Standards for Mathematical Practice

Very basic straight forward problems no synthesis problems no investigations

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

p 416: Problem Solving, making a box out of cardboard
Solve problem using the 4 step plan

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

p 133 4-Step Plan
determining the cost of
pencils, notebooks & folders

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: Card

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

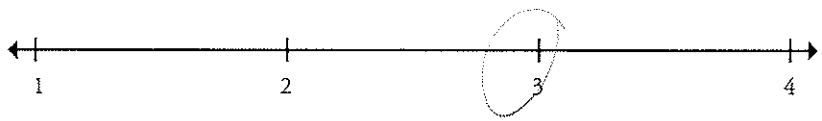
p 262 : Think & discuss

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: CORD

Documenting Alignment to the Standards for Mathematical Practice

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

p 138: use arrangements to find the area of Δ's.

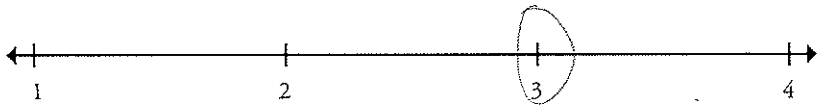
Standard Glass Drinks

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: CoRD

Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

p273: #30 5's graph a quadratic model

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By: _____

Title of Instructional Materials: Cord

Documenting Alignment to the Standards for Mathematical Practice

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

p228: Calculating Wind Chill

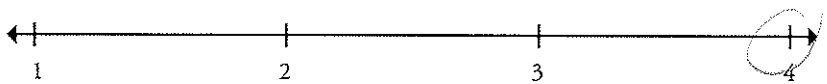
[illegible] must record data, [illegible] °F to °C to the [illegible] to calculate wind chill & describe the [illegible]

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



1 2 3 4

Reviewed By: _____

Title of Instructional Materials: CorD

Documenting Alignment to the Standards for Mathematical Practice

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

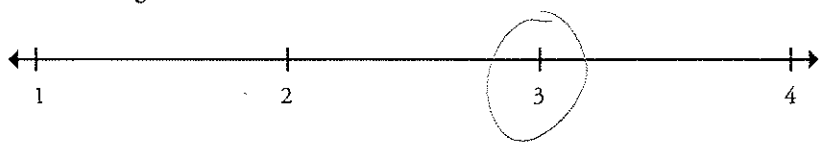
p377: Recreating Clear Water

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: CPO

Documenting Alignment to the Standards for Mathematical Practice

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

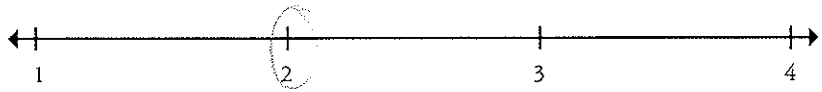
p 380 #4 Simple Interest problem

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By: _____

Title of Instructional Materials: Cord

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

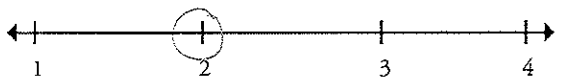
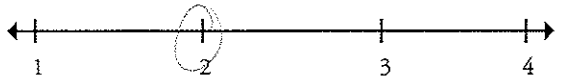
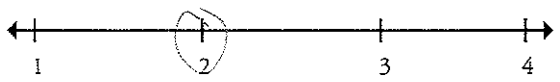
Perform arithmetic operations with complex numbers.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
N-CN.1 Know there is a complex number *i* such that $i^2 = -1$, and every complex number has the form *a* + *bi* with *a* and *b* real. Sec 5.5 - Complex Numbers Sec 6.6 - Solving Quadratics **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 ND investigation, just stated Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

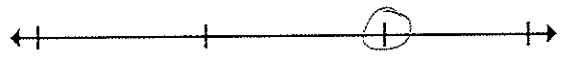
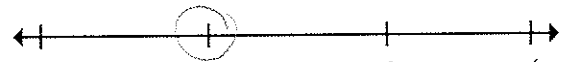
Perform arithmetic operations with complex numbers.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
N-CN.2 Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. Note: i^2 as highest power of i. 5.5 : operations of complex numbers 6.6 : solve quadratics **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  just started Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____ _____

Title of Instructional Materials: Core

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

Use complex numbers in polynomial identities and equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
N-CN.7 Solve quadratic equations with real coefficients that have complex solutions. Note: Polynomials with real coefficients. 6.6 : Solve Quadratics **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  bungee jump height, Ss shown how to solve Skills and Procedures Thinking questions Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

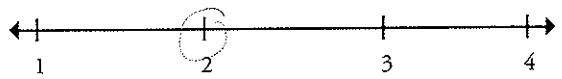
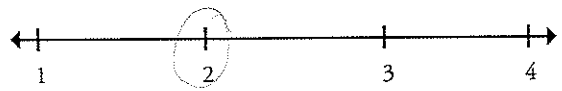
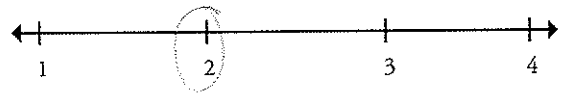
Use complex numbers in polynomial identities and equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.8 (+) Extend polynomial identities to the complex numbers. *For example, rewrite $x^2 + 4$ as $(x + 2i)(x - 2i)$.* Note: Polynomials with real coefficients. 9.5 : Polynomials #27 – only one problem 5's aren't asked to solve by [illegible]	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
Indicate the chapter(s), section(s), and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

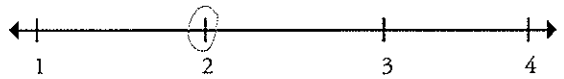
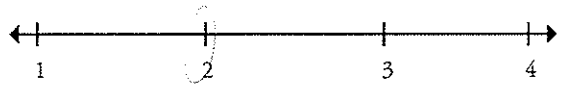
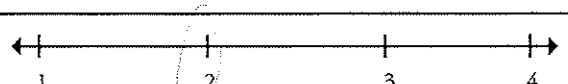
Use complex numbers in polynomial identities and equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.9 (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials. Note: Polynomials with real coefficients. 9.5: The Fund Thm of Alg is given & explained. SS use it to solve polynomial equations **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Covered but nothing special **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — ALGEBRA (A)

Seeing Structure in Expressions (A-SSE)

Interpret the structure of expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-SSE.1a 1. Interpret expressions that represent a quantity in terms of its context.* a. Interpret parts of an expression, such as terms, factors, and coefficients. Note: Polynomial and rational. 5.1 ; Rational Ex 5.2 ; Rational Expressions - parts 9.1a-d; operations w/ polynomials 9.2 ; Factors **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — ALGEBRA (A)

Seeing Structure in Expressions (A-SSE)

Interpret the structure of expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-SSE.1b 1. Interpret expressions that represent a quantity in terms of its context.* b. Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.* Note: Polynomial and rational. 9.2 > multiplying polynomial exp 9.3 10.2 > operations with rational exp 10.3 10.5 – Complex Fractions **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

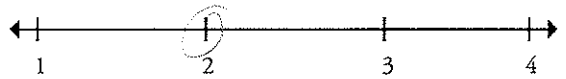
Reviewed By: _____

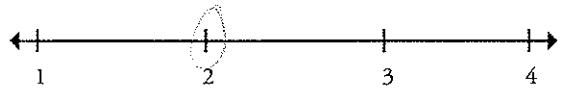
Title of Instructional Materials: Cord

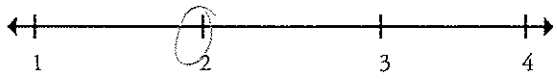
ALGEBRA II — ALGEBRA (A)

Seeing Structure in Expressions (A-SSE)

Interpret the structure of expressions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-SSE.2 Use the structure of an expression to identify ways to rewrite it. *For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.* Note: Polynomial and rational. 5.1 – 5.3 - exponents 9.2-9.3 - factoring binomials 10.2-10.3 - simplify rational expressions 10.5 - simplify complex fractions **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 no difficult or challenging problems Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4





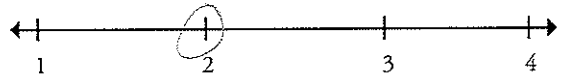
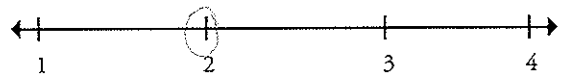
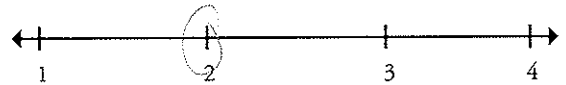


Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Seeing Structure in Expressions (A-SSE)

Write expressions in equivalent forms to solve problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-SSE.4 Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. *For example, calculate mortgage payments.** 11.3: formula just stated **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas a real world  used ^ as to explore what a geo mn is is. Skills and Procedures  no challenging problems Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By: _____

Title of Instructional Materials: Ford

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

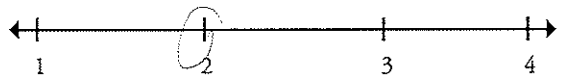
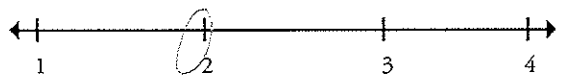
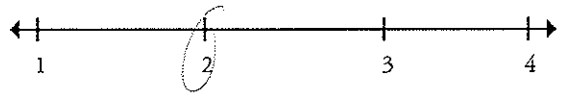
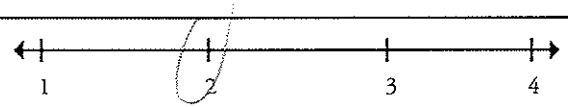
Perform arithmetic operations on polynomials.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-APR.1 Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials. Note: Beyond quadratic. 9.1a; 9.1b; 9.1c; 9.1d } operations with polynomials are covered but nothing challenging **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Closure is not discussed Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Understand the relationship between zeros and factors of polynomials.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-APR.2 Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$. 9.4 Factor Thm is Remainder Thm are stated for one division. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

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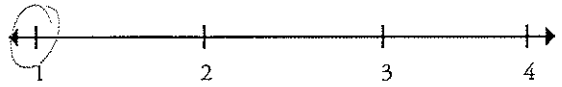
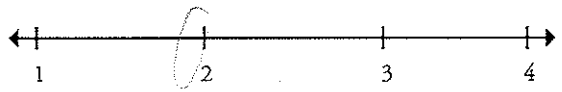
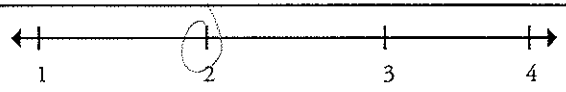
Title of Instructional Materials: Cond

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Understand the relationship between zeros and factors of polynomials.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-APR.3 Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. 9.1: operations of polynomials 9.2: [illegible] 9.3: [illegible] 9.4: Factor + Remainder Thm 9.5: Find roots **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures  basic problems Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Ss are not asked to construct a rough graph
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Use polynomial identities to solve problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-APR.4 Prove polynomial identities and use them to describe numerical relationships. *For example, the polynomial identity* $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ *can be used to generate Pythagorean triples.* Chp 9 Activity 3: A lab is trying to be written up but the author is trying to figure out what is the intent of the standard **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Not covered Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Use polynomial identities to solve problems.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-APR.5 (+) Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.[1] 11.5: Binomial Thm is stated & s's expand using Pascal's Δ & fin Thm. 1 The Binomial Theorem can be proved by mathematical induction or by a combinatorial argument. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Very simple problems Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Cord

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

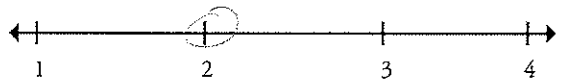
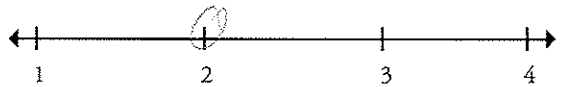
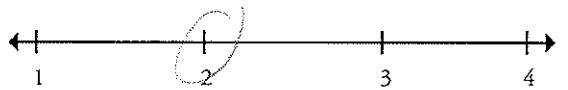
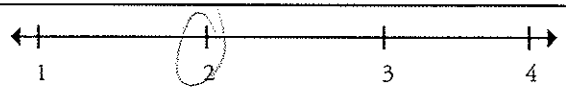
Rewrite rational expressions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-APR.6 Rewrite simple rational expressions in different forms; write *a(x)/b(x)* in the form *q(x)* + *r(x)/b(x)*, where *a(x)*, *b(x)*, *q(x)*, and *r(x)* are polynomials with the degree of *r(x)* less than the degree of *b(x)*, using inspection, long division, or, for the more complicated examples, a computer algebra system. ? Note: Linear and quadratic denominators. 9.2 - factoring 9.3 Long div & Syn div not asked to state their answer in a specific form. 9.4 R Thm / Fac Thm 10.2 diving rat exp 10.3 Add / Sub rat exp 10.4 solving rational eq **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** CAS ? Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Rewrite rational expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-APR.7 (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions. Note: Linear and quadratic denominators. 10.2: Mult + Div 10.3: Add + Sub 10.4: Rat Eq **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Closure is not discussed Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — ALGEBRA (A)

Creating Equations (A-CED)

Create equations that describe numbers or relationships.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-CED.1 Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.** Note: Equations using all available types of expressions, including simple root functions. 1.2+1.3: linear eq & ineq 5.4: radical eq - Ss not asked to create them 6.2 to 6.6: quadratic eq not ineq (p258 #25) — circuits 8.5: solve simple exp + log equations 9.5: solving simple polynomial eq 10.4: solving rational eq **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Cord

ALGEBRA II — ALGEBRA (A)

Creating Equations (A-CED)

Create equations that describe numbers or relationships.

A-CED.2

Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.*

Note: Equations using all available types of expressions, including simple root functions.

1.4+1.5: linear eq graph linear + inequality (p35 #22)
2.1: Sys of Eq + Graphing
4.1: Graphing Relations
4.4-4.5: Abs value, step, piecewise functions
6.1: Solve Quad by graphing #30
7.3-7.6: conics
8.1: Exp functions - graph
10.1: rational - graph

Indicate the chapter(s), section(s), and/or page(s) reviewed.

8.2: Log - graph

10.1: p433: A Graph can cross a HA unlike what is stated

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas

1 2 3 4

Skills and Procedures

1 2 3 4

Mathematical Relationships

1 2 3 4

Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — ALGEBRA (A)

Creating Equations (A-CED)

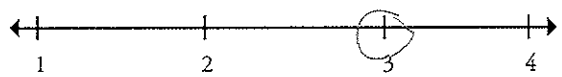
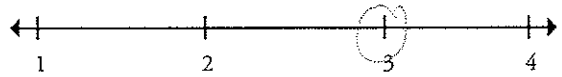
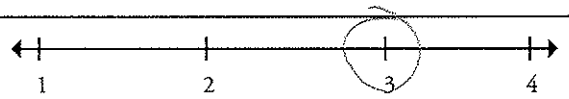
Create equations that describe numbers or relationships.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. *For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.** Note: Equations using all available types of expressions, including simple root functions. 2.1 2.2 2.3 ; Sys of Ineq 2.4 ; Linear Programming constraints 2.5 ; Sys of 3 eq **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 p 92 Activity 2 - Battle stations + Math Applications Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — ALGEBRA (A)

Creating Equations (A-CED)

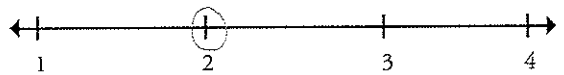
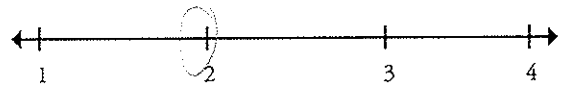
Create equations that describe numbers or relationships.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-CED.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. *For example, rearrange Ohm's law V = IR to highlight resistance R.** Note: Equations using all available types of expressions, including simple root functions. p 232: * 3a,b,c,d **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — ALGEBRA (A)

Reasoning with Equations and Inequalities (A-REI)

Understand solving equations as a process of reasoning and explain the reasoning.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-REI.2 Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. Note: Simple radical and rational. 5.4 : radical eg. 10.4 : rational eg **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  5's shown as example Skills and Procedures Simple problems Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — ALGEBRA (A)

Reasoning with Equations and Inequalities (A-REI)

Represent and solve equations and inequalities graphically.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-REI.11 Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.* Note: Combine polynomial, rational, radical, absolute value, and exponential functions. 6.1: solve quadrs by graphing 7.7: solve a sys of eqns by substitution & elimination. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Cord

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

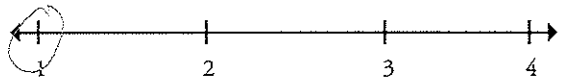
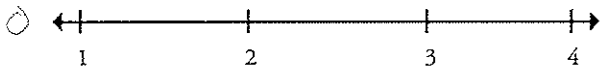
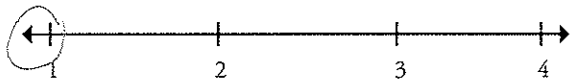
Interpret functions that arise in applications in terms of the context.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. *Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.** Note: Include rational, square root and cube root; emphasize selection of appropriate models. 4.1 – 4.5 : Basic eq 8.1 - 8.2 : Exp/Log: s's asked to draw graphs but not interpret key features 10.1 : rational : describe discontinuities & VA, HA 12.3 - 12.4 : trig ? **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 13.1 - 13.3 : amp/pd/F of curves, VA graph sine, cos, tan	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** 4.1-4.5 : does not discuss key features Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

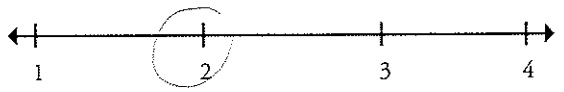
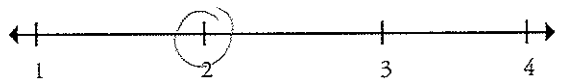
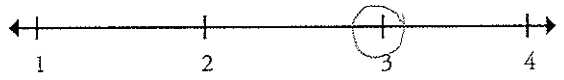
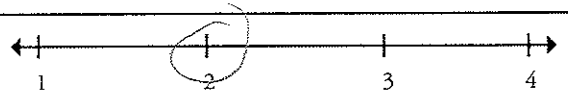
Interpret functions that arise in applications in terms of the context.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.** Note: Emphasize selection of appropriate models. 4.1 – 4.5: Domain covered in HW (Linear) 8.1-8.2: exp/Log: Domain stated but Ss not asked to find it in the HW 10.1: conical: Not covered 12.3-12.4: trig? **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 13.1: not discussed	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Ss not asked to find the domain in any HW problems Overall Rating

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

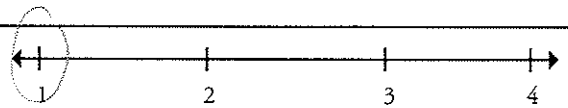
Interpret functions that arise in applications in terms of the context.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.6 Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.* Note: Emphasize selection of appropriate models. 1.4 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  many word problems **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

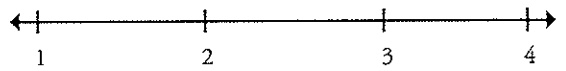
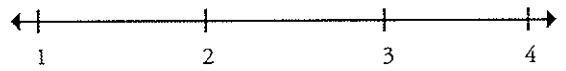
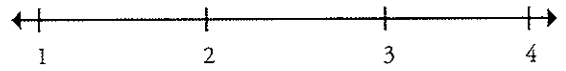
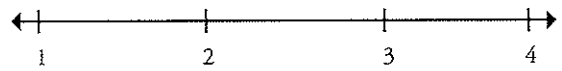
Analyze functions using different representations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.7b 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. Note: Focus on using key features to guide selection of appropriate type of model function. 4.4: 5's are expected to be able to recognize these graphs but not graph them. all are shown **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Analyze functions using different representations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-IF.7c 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. Note: Focus on using key features to guide selection of appropriate type of model function. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** S's are not expected to graph polynomial functions Overall Rating 0 

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Analyze functions using different representations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.7e 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. Note: Focus on using key features to guide selection of appropriate type of model function. 8.1: S's learn to graph exp functions by making a table of values. No S.C. 8.2: Log S's learn to graph by making a table but by what means? **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 13.1: sine, cosine, tan, amp, per trying graph using what means? Not stated in the HW	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** S Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

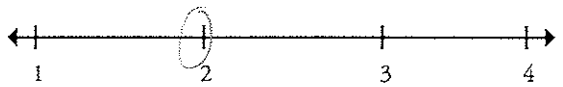
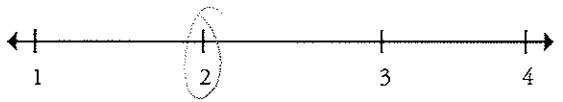
Analyze functions using different representations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-IF.8a 8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. Note: Focus on using key features to guide selection of appropriate type of model function. 6.1: Find zeros by graphing 6.2: Solve by using sq roots 6.3: Solve by completing the sq 6.4: Solve by factoring 6.5: Quad Formula **Indicate the chapter(s), section(s), and/or page(s) reviewed.** p273: 29, 30 p277: #1, 2, 3, 5, 8, 9, 10 Good word problems	Important Mathematical Ideas 1 2 3 4 Skills and Procedures word problems 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Symmetry not emphasized Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

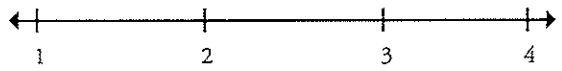
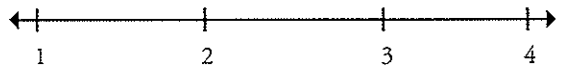
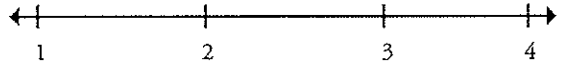
Analyze functions using different representations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-IF.8b 8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. b. Use the properties of exponents to interpret expressions for exponential functions. *For example, identify percent rate of change in functions such as* $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^{t/10}$, *and classify them as representing exponential growth or decay.* Note: Focus on using key features to guide selection of appropriate type of model function. 8.1 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures basic problems Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

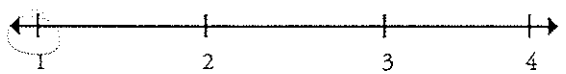
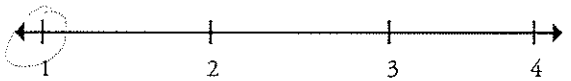
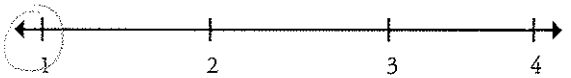
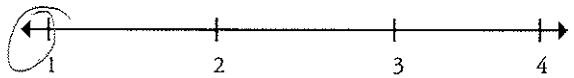
Analyze functions using different representations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.* Note: Focus on using key features to guide selection of appropriate type of model function. See 4.6: The author plans to cover it but it has not been written yet. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Not yet covered
	Overall Rating 0

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

Build a function that models a relationship between two quantities.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-BF.1b 1. Write a function that describes a relationship between two quantities.* b. Combine standard function types using arithmetic operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.* Note: Include all types of functions studied. p158: students write functions **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Not really sure if 2 different functions are being used together Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

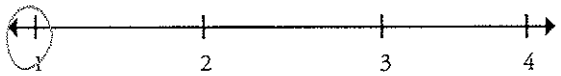
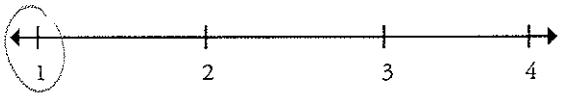
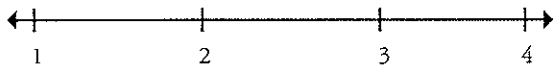
Build new functions from existing functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-BF.3 Identify the effect on the graph of replacing *f(x)* by *f(x) + k*, *k f(x)*, *f(kx)*, and *f(x + k)* for specific values of *k* (both positive and negative); find the value of *k* given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.* Note: Include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types. 4.5 Abs value, quad, linear } explain translations 8.1 exp and $f(kx) = kf(x)$ **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 10.1 rational, not really discussed	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** radical Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

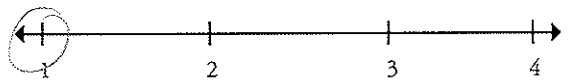
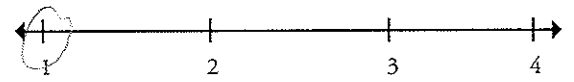
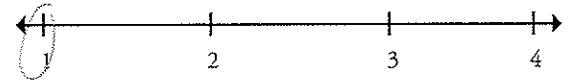
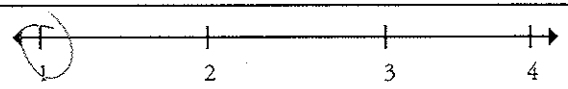
Build new functions from existing functions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-BF.4a 4. Find inverse functions. a. Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. *For example,* $f(x) = 2x^3$ *or* $f(x) = (x+1)/(x-1)$ *for* $x \neq 1$. Note: Include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types. 4.3: find the inverse of quad, linear **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** radical, rational, exp Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — FUNCTIONS (F)

Linear, Quadratic, and Exponential Models (F-LE)

Construct and compare linear, quadratic, and exponential models and solve problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-LE.4 For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.* Note: Logarithms as solutions for exponentials. 8.5: solve exp & log equations use base 2, 10, e **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  very simple problems Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Trigonometric Functions (F-TF)

Extend the domain of trigonometric functions using the unit circle.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-TF.1 Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. 12.2 : Arc length def is stated **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Find length of intercepted arc Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — FUNCTIONS (F)

Trigonometric Functions (F-TF)

Extend the domain of trigonometric functions using the unit circle.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-TF.2 Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle. 12.2 & 12.3 p 535: use the unit circle to evaluate the sin function with decimal values given **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** weakly covered **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Trigonometric Functions (F-TF)

Model periodic phenomena with trigonometric functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-TF.5 Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.* 13.1: sine, cosine + tan are covered amplitude + # of cycles **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** midline not discussed Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — FUNCTIONS (F)

Trigonometric Functions (F-TF)

Prove and apply trigonometric identities.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-TF.8 Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle. 13.2 $\sin^2\theta + \cos^2\theta = 1$ is stated and not verified. S's are asked to verify identities **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** quadrant of an angle? Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Interpreting Categorical and Quantitative Data (S-ID)

Summarize, represent, and interpret data on a single count or measurement variable.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-ID.4 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve. 14.6 (Stud Supp) **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas: 1 2 3 4 Skills and Procedures: 1 2 3 4 Mathematical Relationships: 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** spreadsheets + tables? Overall Rating: 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

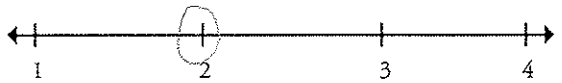
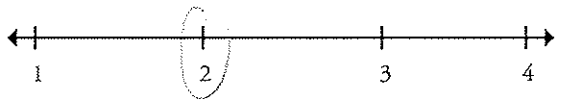
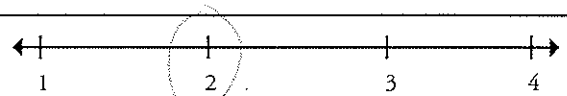
Understand and evaluate random processes underlying statistical experiments.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-IC.1 Understand statistics as a process for making inferences about population parameters based on a random sample from that population. StudSupp 14.7: introduced 14.8: making pop inferences **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** weak on making population inferences Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Understand and evaluate random processes underlying statistical experiments.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
S-IC.2 Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. *For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?.* Stud Supp 14.7 & lab 14.7 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Core

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

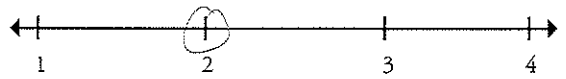
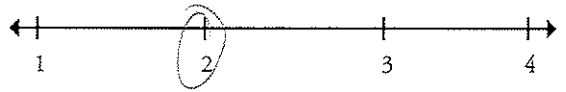
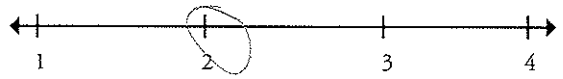
Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
S-IC.3 Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each. 14.8 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Different types of sampling are discussed but differences between surveys, experiments & observations are not studied Overall Rating 0 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-IC.4 Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling. 14.4 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): margin of error?
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: Cord

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-IC.5 Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant. Sec 14.7 & 14.7 lab comparison of 2 treatments? **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** not covered Overall Rating 0 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-IC.6 Evaluate reports based on data. Sec 14.6 + 14.7 lab p44: OW document report p39: comparison & analyzing graphs - not reports **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: Card

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Using Probability to Make Decisions (S-MD)

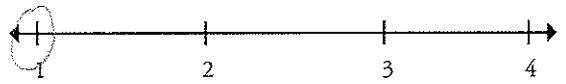
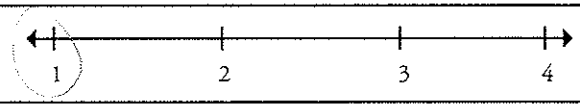
Use probability to evaluate outcomes of decisions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-MD.6 (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator). Note: Include more complex situations. 14.5 **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** drawing lots. random number generator? Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: CORD

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Using Probability to Make Decisions (S-MD)

Use probability to evaluate outcomes of decisions	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-MD.7 (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game). Note: Include more complex situations. 14 5 p29 - Activity **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-IC.5 Evaluate reports based on data. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Using Probability to Make Decisions (S-MD)

Use probability to evaluate outcomes of decisions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-MD.6 (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator). Note: Include more complex situations. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Using Probability to Make Decisions (S-MD)

Use probability to evaluate outcomes of decisions	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S-MD.7 (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game). Note: Include more complex situations. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Understand and evaluate random processes underlying statistical experiments.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
S-IC.2 Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. *For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?.* **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
S-IC.3 Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
S-IC.4 Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Make inferences and justify conclusions from sample surveys, experiments, and observational studies.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
S-IC.6 Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Trigonometric Functions (F-TF)

Model periodic phenomena with trigonometric functions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-TF.5 Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.*	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
Indicate the chapter(s), section(s), and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Trigonometric Functions (F-TF)

Prove and apply trigonometric identities.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-TF.8 Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
Indicate the chapter(s), section(s), and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Interpreting Categorical and Quantitative Data (S-ID)

Summarize, represent, and interpret data on a single count or measurement variable.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
S-ID.4 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
Indicate the chapter(s), section(s), and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — STATISTICS AND PROBABILITY (S)

Making Inferences and Justifying Conclusions (S-IC)

Understand and evaluate random processes underlying statistical experiments.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
S-IC.1 Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
Indicate the chapter(s), section(s), and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

Build new functions from existing functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-BF.4a 4. Find inverse functions. a. Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. *For example, $f(x) = 2x^3$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$.* Note: Include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Linear, Quadratic, and Exponential Models (F-LE)

Construct and compare linear, quadratic, and exponential models and solve problems.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-LE.4 For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.* Note: Logarithms as solutions for exponentials. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Trigonometric Functions (F-TF)

Extend the domain of trigonometric functions using the unit circle.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-TF.1 Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Trigonometric Functions (F-TF)

Extend the domain of trigonometric functions using the unit circle.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-TF.2 Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Analyze functions using different representations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-IF.8b 8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. b. Use the properties of exponents to interpret expressions for exponential functions. *For example, identify percent rate of change in functions such as* $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^{t/10}$, *and classify them as representing exponential growth or decay* Note: Focus on using key features to guide selection of appropriate type of model function. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Analyze functions using different representations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.* Note: Focus on using key features to guide selection of appropriate type of model function. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

Build a function that models a relationship between two quantities.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-BF.1b 1. Write a function that describes a relationship between two quantities.* b. Combine standard function types using arithmetic operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model* Note: Include all types of functions studied. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

Build new functions from existing functions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-BF.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.* Note: Include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Analyze functions using different representations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.7b 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. Note: Focus on using key features to guide selection of appropriate type of model function. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Analyze functions using different representations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.7c 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. Note: Focus on using key features to guide selection of appropriate type of model function. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Analyze functions using different representations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.7e 7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.* e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. Note: Focus on using key features to guide selection of appropriate type of model function. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Analyze functions using different representations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
F-IF.8a 8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. Note: Focus on using key features to guide selection of appropriate type of model function. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Reasoning with Equations and Inequalities (A-REI)

Represent and solve equations and inequalities graphically.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-REI.11 Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions." Note: Combine polynomial, rational, radical, absolute value, and exponential functions. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Interpret functions that arise in applications in terms of the context.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-IF.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. *Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity."* Note: Include rational, square root and cube root; emphasize selection of appropriate models. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Interpret functions that arise in applications in terms of the context.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-IF.6 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function."* Note: Emphasize selection of appropriate models. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Interpreting Functions (F-IF)

Interpret functions that arise in applications in terms of the context.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-IF.8 Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph." Note: Emphasize selection of appropriate models. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Creating Equations (A-CED)

Create equations that describe numbers or relationships.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.* Note: Equations using all available types of expressions, including simple root functions. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Creating Equations (A-CED)

Create equations that describe numbers or relationships.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. *For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.* Note: Equations using all available types of expressions, including simple root functions. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Creating Equations (A-CED)

Create equations that describe numbers or relationships.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-CED.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. *For example, rearrange Ohm's law $V = IR$ to highlight resistance R.* Note: Equations using all available types of expressions, including simple root functions. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Reasoning with Equations and Inequalities (A-REI)

Understand solving equations as a process of reasoning and explain the reasoning.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-REI.2 Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. Note: Simple radical and rational. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Use polynomial identities to solve problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-APR.5 (+) Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.[1] No direct correlation to Pascal Triangle; no argument as to why Binomial Thm works (but students are expected to know that based on wording of exercises, 1. The Binomial Theorem can be proved by mathematical induction or by a combinatorial argument. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 11.5	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Rewrite rational expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-APR.6 Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system. Note: Linear and quadratic denominators. N/A **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 10	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Rewrite rational expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-APR.7 (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions. Note: Linear and quadratic denominators. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Creating Equations (A-CED)

Create equations that describe numbers or relationships.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
A-CED.1 Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*[*] Note: Equations using all available types of expressions, including simple root functions. **Indicate the chapter(s), section(s), and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Perform arithmetic operations on polynomials.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-APR.1 Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials. Note: Beyond quadratic Good ex. of finding profit algebraically, but text does not address how $(P(x), +, \cdot)$ is closed. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9.1	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Understand the relationship between zeros and factors of polynomials.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-APR.2 Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$. Good visuals & explanation. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9.4	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Understand the relationship between zeros and factors of polynomials.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-APR.3 Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. If student is to graph anything, s/he is encouraged to do so only by graphing tool & NEVER by hand. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 9 & Ch 10	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Arithmetic with Polynomials and Rational Expressions (A-APR)

Use polynomial identities to solve problems.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-APR.4 Prove polynomial identities and use them to describe numerical relationships. *For example, the polynomial identity* $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ *can be used to generate Pythagorean triples.* Not addressed **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Ch 9	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II - ALGEBRA (A)

Seeing Structure in Expressions (A-SSE)

Interpret the structure of expressions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-SSE.1a 1. Interpret expressions that represent a quantity in terms of its context.* a. Interpret parts of an expression, such as terms, factors, and coefficients. Note: Polynomial and rational. Nice chart, but no practice offered in identifying parts **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-1	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 of a polynomial **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Seeing Structure in Expressions (A-SSE)

Interpret the structure of expressions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-SSE.1b 1. Interpret expressions that represent a quantity in terms of its context.* b. Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P.* Note: Polynomial and rational. Nice apps, but they seem disconnected to the content. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** pg 421 - 425	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Seeing Structure in Expressions (A-SSE)

Interpret the structure of expressions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-SSE.2 Use the structure of an expression to identify ways to rewrite it. *For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.* Note: Polynomial and rational A few problems are offered for student to solve, but no examples for students to follow by. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 9-2	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — ALGEBRA (A)

Seeing Structure in Expressions (A-SSE)

Write expressions in equivalent forms to solve problems.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
A-SSE.4 Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. *For example, calculate mortgage payments.* * A simple geom. series offered for examination, but text jumps right to formulas w/o any proof or explanation. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** 11.3	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

Perform arithmetic operations with complex numbers.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.2 Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. Note: i^2 as highest power of i. ibid	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
Indicate the chapter(s), section(s), and/or page(s) reviewed. 5-5	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

Use complex numbers in polynomial identities and equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.7 Solve quadratic equations with real coefficients that have complex solutions. Note: Polynomials with real coefficients. In previous section text barely discusses $i = \sqrt{-1}$. Then, text goes on to say if $\sqrt{b^2 - 4ac} < 0$, then no real	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Soln. While this is true, they don't even mention $\mathbb{C}$ soln's!
Indicate the chapter(s), section(s), and/or page(s) reviewed. 6-5	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

Use complex numbers in polynomial identities and equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.8 (+) Extend polynomial identities to the complex numbers. *For example, rewrite $x^2 + 4$ as $(x + 2i)(x - 2i)$.* Note: Polynomials with real coefficients. This section only addressed factors in $\mathbb{R}$, no $\mathbb{C}$.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence**
Indicate the chapter(s), section(s), and/or page(s) reviewed. 6-4	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

Use complex numbers in polynomial identities and equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.9 (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials. Note: Polynomials with real coefficients. ~~Briefly discusses factor thm for $\mathbb{R}$ & $\mathbb{C}$, but never mentions F.T.A. anywhere in book.~~	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Text spends one page discussing F.T.A but no proof of ex. why!
Indicate the chapter(s), section(s), and/or page(s) reviewed. ~~9-4~~ 9-5	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

Perform arithmetic operations with complex numbers.

N-CN.1

Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.

Text simply tells stud. def & does not develop why $i = \sqrt{-1}$, $i^2 = -1$, ... etc. Very skill driven...

Indicate the chapter(s), section(s), and/or page(s) reviewed.

5-5

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary / Justification / Evidence

Text doesn't even address the formal def. of $x \in \mathbb{C}$!

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

0

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), section(s), or page(s) reviewed.

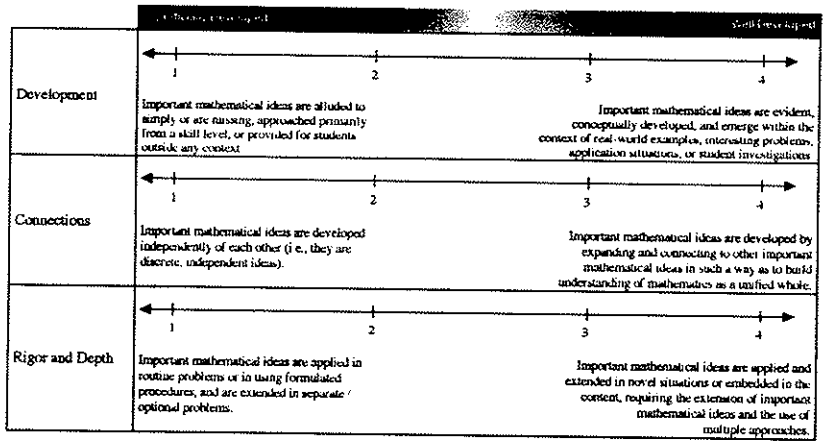
Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

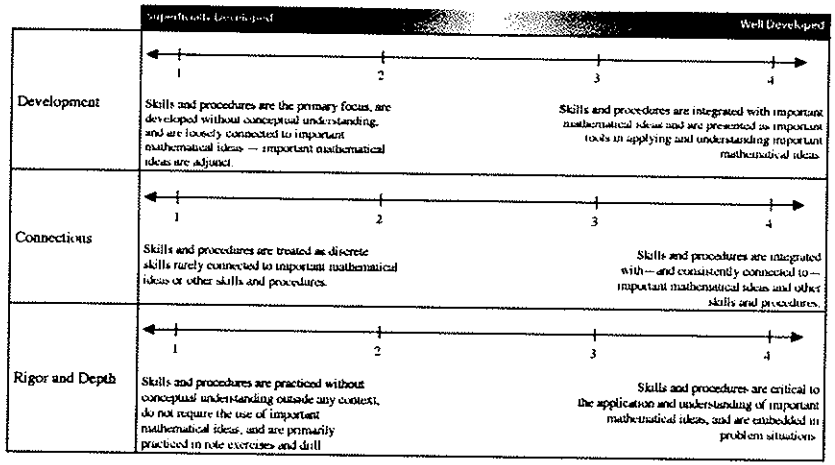
Overall Rating

1 2 3 4

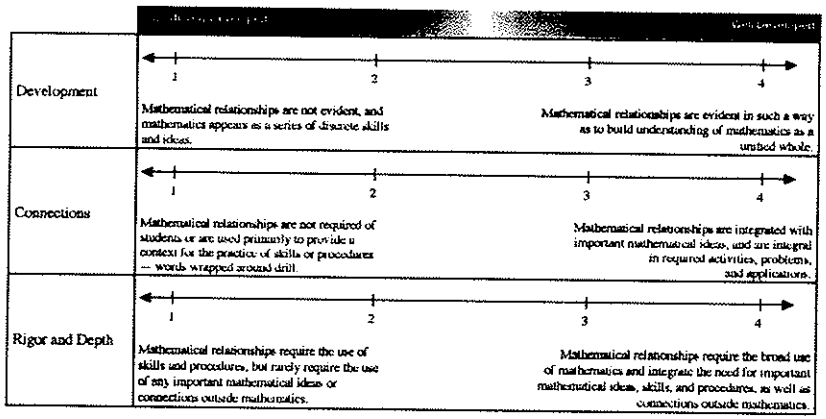
Important Mathematical Ideas: Understanding the scoring



Skills and Procedures: Understanding the scoring



Mathematical Relationships: Understanding the scoring



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any).

Summary/Justification/Evidence

Overall Rating

1 2 3 4

Acknowledgments

Unless otherwise noted, all staff listed here are affiliated with the Dana Center.

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Laurie Garland, director of programs and product development
Sam Zigrossi, senior advisor

Developers and facilitators

Patti Bridwell, senior program coordinator for leadership
Laurie Garland, director of programs and product development
Tom McVey, professional development team lead
Sam Zigrossi, senior advisor

Our thanks

We gratefully acknowledge the more than 100 school districts and thousands of educators who have informed the development of these resources.

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Tom McVey, professional development team lead and print production manager
Phil Swaan, senior designer

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Introduction

Phase 1: **Studying the Standards**

Phase 2: **Narrowing the Field of Instructional Materials**

Phase 3: **Assessing Mathematical Content Alignment**

The purpose of Phase 3: Assessing Mathematical Content Alignment is to determine the degree to which the materials are aligned to the standards (content and processes). In Phase 3, participants conduct an in-depth review of the 2-3 instructional materials selected in Phase 2. The Phase 3 process requires selection committee members to use set criteria in order to determine a rating for each sample, to cite examples to justify their score for each sample, and to document standards that are missing or not well-developed in the instructional materials examined.

Implementation

As a whole group, selection committee members should practice applying the Phase 3 rubric. The purpose of the whole group practice is to promote inter-rater reliability and calibration.

In Phase 3 it is not important to analyze every page, section, or chapter of a resource. It is important to identify an area, topic, or big idea for the deep content analysis of Phase 3 (e.g. development of equivalent fractions, addition of whole numbers, development of proportionality…). The identified area, topic, or big idea will be used for all the instructional materials considered in Phase 3. The area, topic, or big idea can be identified through the use of student achievement data, curriculum priorities/challenges, or ideas that typically make up a greater portion of instruction in particular grade levels/courses. In most cases, Phase 3 will identify the one resource that is best aligned.

Step-by-Step Instructions

1. Use your current adoption to practice using the Phase 3 rubric. Select one big idea to focus your analysis (see note above for selecting the area, topic, or big idea).
2. Independently, committee members use their current resource, the identified big idea (and associated pages in that resource), and the Phase 3 rubric to score and document the extent to which the material (content and processes) aligns to the standards.
3. In small groups, committee members share their scoring and justifications. Small groups come to consensus on how the current resource would score on this big idea.
4. Each small group shares with the large group their score. Repeat the consensus building to generate a large group score on this big idea.
5. Clarify any misunderstandings about how to apply the rubric before committee members begin to use Phase 3 rubric on the selected materials.

6. Based on the size of the selection committee, determine the number of areas, topics, or big ideas to be examined for each grade/course. If the group size is large, more areas, topics, big ideas can be examined within each grade level course.
7. Make sure committee members have multiple copies of the Phase 3 rubric.
8. Committee members apply the Phase 3 rubric for each of the materials.
9. Establish a time line for groups to complete and submit Phase 3 documentation.
10. Establish a data collection and analysis process to attain a rating for each resource.

Materials and Supplies

- Phase 3: Assessing Mathematical Content Alignment black line master — multiple copies per person
- Currently used instructional resource
- The 2 to 4 instructional materials selected in Phase 2

Phase 4: **Assessing Vertical Alignment of Instructional Materials**

Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Traditional Pathway for High School: Algebra II

a project of
The Charles A. Dana Center
at the University of Texas at Austin

Frontmatter

Instructional Materials Analysis and Selection
Assessing Content Alignment to the Common Core State Standards for Mathematics

This tool provides educators with a structured way to make informed decisions when selecting mathematics instructional materials. In particular, it can help you become more knowledgeable about the *Common Core State Standards for Mathematics* so you can select instructional materials aligned with these standards.

This resource can also be used with the Dana Center's larger 4-phase *Instructional Materials Analysis and Selection* toolset: Phase 1: *Studying the Standards*, Phase 2: *Narrowing the Field of Instructional Materials*, Phase 3: *Assessing Subject-Area Content Alignment*, and Phase 4: *Assessing Vertical Alignment of Instructional Materials*. The particular resource you hold is a phase 3 tool that has been customized for assessing the alignment of instructional materials with the *Common Core State Standards for Mathematics*. Note that in 2009, the Dana Center developed a similar tool for Indiana educators to use in analyzing the alignment of instructional materials to Indiana's *Academic Standards for Mathematics*.

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"Alg II": Learning in Context Cord

Instructional Materials Analysis and Selection

Phase 3:
Assessing Content Alignment to the Common Core State Standards for Mathematics

Summary Evaluation: Very skill driven with some applications (which can be easily disconnected from skill development if teacher & student are not careful). The content is very basic, with little room for challenging problems.

A project of
The Indiana Education Roundtable, The Indiana Department of Education,
and
The Charles A. Dana Center at The University of Texas at Austin

2010–2011

Text does not meet CCSS.

Frontmatter

About the development of this resource

This tool, *Instructional Materials Analysis and Selection: Assessing Content Alignment to the Common Core State Standards for Mathematics*, draws on the Dana Center's nearly 20 years of experience in strengthening education and has been used extensively in Texas and, increasingly, other states, to help local school districts and schools select instructional materials aligned with their standards. Development and production of the Instructional Materials Analysis toolset was supported by the Charles A. Dana Center.

This resource consists of a set of 15 individual grade-level / course documents that span kindergarten through the third year of high school mathematics. There is a document for each grade from kindergarten through 8, and six documents for high school mathematics (one each for the three courses in the traditional high school pathway Algebra I, Geometry, Algebra II; and one each for the three courses in the integrated high school pathway Mathematics I, Mathematics II, and Mathematics III).* At the request of various states and other entities, the Dana Center has populated this *Instructional Materials Analysis and Selection* tool with standards from the *Common Core State Standards for Mathematics* for use by local districts in selecting instructional materials aligned with these standards.

Note that the copyright of the *Common Core State Standards for Mathematics* is held by the National Governors Association Center for Best Practices and the Council of Chief State School Officers (collectively, NGA Center/CCSSO). This use of the CCSS for Mathematics is done under the CCSS Terms of Use, available at www.corestandards.org/terms-of-use. Specifically, this work is done under the Terms of Use "non-exclusive, royalty-free license to copy, publish, distribute, and display the Common Core State Standards for non-commercial purposes that support the Common Core State Standards Initiative." For a complete copy of the *Common Core State Standards for Mathematics* as well as the *CCSS for Mathematics, Appendix A: Designing high school mathematics courses based on the Common Core State Standards*, go to www.corestandards.org/the-standards.

October 2010 release.

We welcome your comments and suggestions for improvements—please send to dana-txshop@utlists.utexas.edu or the address in the copyright section above.

About the Charles A. Dana Center at The University of Texas at Austin

The Dana Center works to raise student achievement in K–16 mathematics and science, especially for historically underserved populations. We do so by providing direct service to school districts and institutions of higher education; to local, state, and national education leaders; and to agencies, nonprofits, and professional organizations concerned with strengthening American education.

The Center was founded in 1991 at The University of Texas at Austin. We carry out our work by supporting high standards and building system capacity; collaborating with key state and national organizations to address emerging issues; creating and delivering professional supports for educators and education leaders; and writing and publishing education resources, including student supports. Our staff of more than 60 has worked with dozens of school systems in nearly 20 states and with 90 percent of Texas's more than 1,000 school districts. We are committed to ensuring that the accident of where a child attends school does not limit the academic opportunities he or she can pursue.

For more information about our programs and resources, see our homepage at www.utdanacenter.org. To access our resources (many of them free), see our products index at www.utdanacenter.org/products. And to learn more about our professional development—and sign up online—go to www.utdanacenter.org/pd.

* For the high school course sequences, we relied on the *Common Core State Standards Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards*, developed for the CCSS initiative by Achieve, Inc., which convened and managed the Achieve Pathways Group.

Reviewed By: _____

Title of Instructional Materials: Coord Algebra 2

Documenting Alignment to the Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Indicate the chapter(s), section(s), or page(s) reviewed.

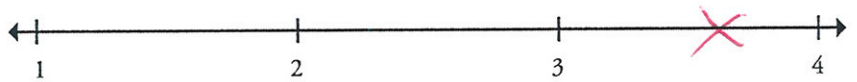
Ch. 5, 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

From the "Think and Discuss" in each section and the lab and math Applications in each chapter, along with the 4-step P.S.S. students are led thru a cycle that engages them to persevere

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch. 5, 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

The book leads the students too much and doesn't promote independent thinking in this process

Summary/Justification/Evidence

The presentation of the content throughout the chapter allows the student to Reason Abstractly and quantitatively then the math Labs at the end of each chapter

Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Indicate the chapter(s), section(s), or page(s) reviewed.

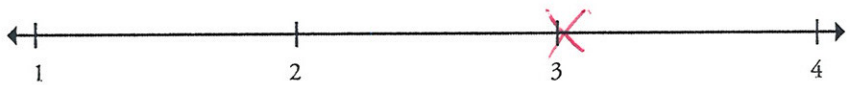
Ch. 5, 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

The "Think and Discuss" ~~set~~ element to each lesson along with the math applications at the end of the chapter asking for explanations engage students in constructing and critiquing reasoning.

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

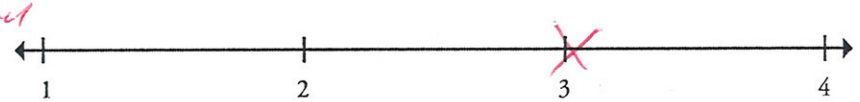
Ch. 5, 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

The beginning Chapter projects and end of chapter applications and Chapter labs engage students in using different models and applying them to aspects of everyday life.

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), section(s), or page(s) reviewed.

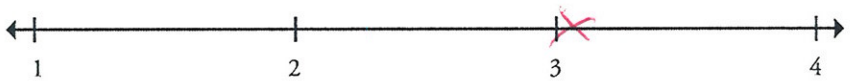
Ch. 5, 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

The "Activities" in many of the lessons encourage students to actively consider available tools, including graphing calculators and Algebra tiles, to deepen their understanding of concepts

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Indicate the chapter(s), section(s), or page(s) reviewed.

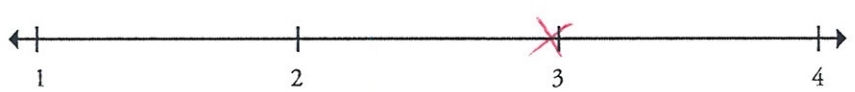
Ch. 5, 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Thru the "Think and Discuss" in each section, along with the 4-step problem solving strategy in several sections, students are repeatedly reminded to attend to precision

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), section(s), or page(s) reviewed.

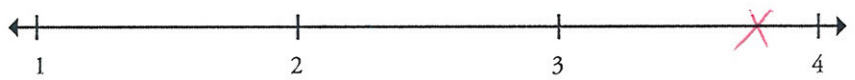
Ch. 5, 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Students are regularly guided to look for patterns or structure in the lesson activities in the critical thinking question ~~Part~~ with which each concludes

Overall Rating



Reviewed By: _____

Title of Instructional Materials: _____

Documenting Alignment to the Standards for Mathematical Practice

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

Ch. 5, 6

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

I did not notice students being encouraged to evaluate reasonableness of intermediate results

Summary/Justification/Evidence

students are engaged in noticing regularity in repeated reasoning in the "Think and Discuss" of each section.

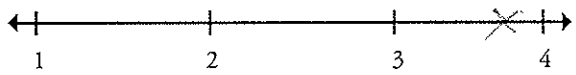
Overall Rating

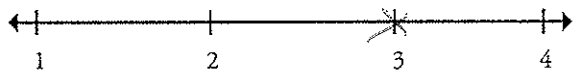
Reviewed By: _____

Title of Instructional Materials: _____

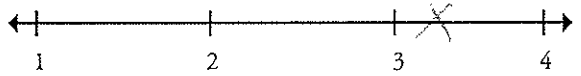
ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)





Perform arithmetic operations with complex numbers.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.1 Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** students are led from formal definition, think and discuss, and real-life applications
Indicate the chapter(s), section(s), and/or page(s) reviewed. Sect. 5.5 and 6.6	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

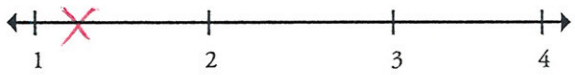
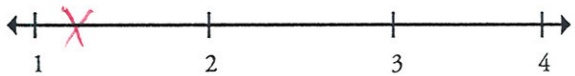
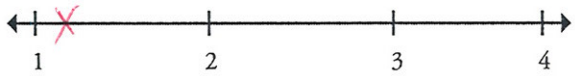
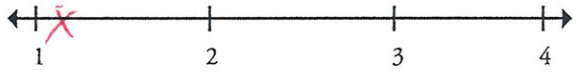


Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

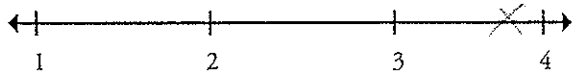
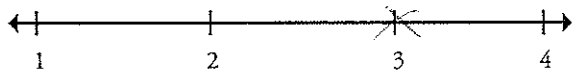
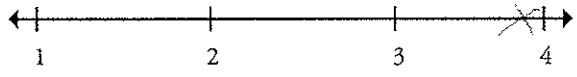
Perform arithmetic operations with complex numbers.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.2 Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers. Note: i^2 as highest power of i. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Sect 5.5, 6.6, 9.5	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** very brief mention of add/subtract/mult/trip **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** students are left to figure these out on their own with little or no mention before a problem set Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

Use complex numbers in polynomial identities and equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
N-CN.7 Solve quadratic equations with real coefficients that have complex solutions. Note: Polynomials with real coefficients. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Sect. 6.6	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** The whole concept is developed and taught then a real-world example and discussion **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

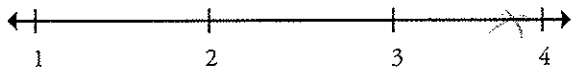
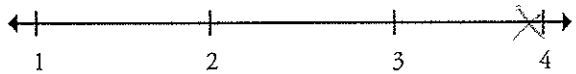
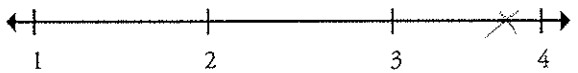
Use complex numbers in polynomial identities and equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
N-CN.8 (+) Extend polynomial identities to the complex numbers. *For example, rewrite $x^2 + 4$ as $(x + 2i)(x – 2i)$.* Note: Polynomials with real coefficients. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Sect. 9.5	Important Mathematical Ideas: 1 2 3 4 (X at 1) Skills and Procedures: 1 2 3 4 (X at 1) Mathematical Relationships: 1 2 3 4 (X at 1) **Summary / Justification / Evidence** This idea is alluded to, but it is left up to the teacher to develop **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** It is essentially missing from the text Overall Rating: 1 2 3 4 (X at 1)

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — NUMBER AND QUANTITY (N)

The Complex Number System (N-CN)

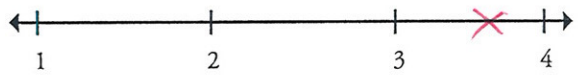
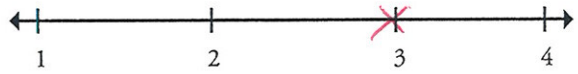
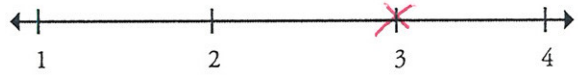
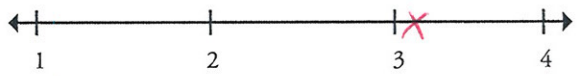
Use complex numbers in polynomial identities and equations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
N-CN.9 (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials. Note: Polynomials with real coefficients. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Sect. 9.5	Important Mathematical Ideas  Skills and Procedures Mathematical Relationships  **Summary / Justification / Evidence** Developed well and related to real-world **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

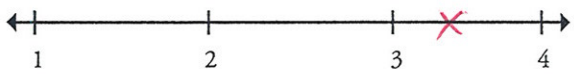
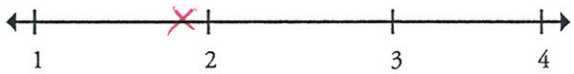
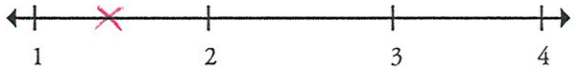
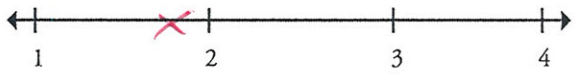
Build a function that models a relationship between two quantities.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-BF.1b 1. Write a function that describes a relationship between two quantities.* b. Combine standard function types using arithmetic operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.* Note: Include all types of functions studied. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Chapter 4 8.1, 8.2 10.1 12.3 12.4 13.1	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** Overall, these ideas were well developed and applied **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** I could NOT find 1 example of adding a constant function to a decaying exponential. Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

Build new functions from existing functions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-BF.3 Identify the effect on the graph of replacing *f(x)* by *f(x) + k*, *k f(x)*, *f(kx)*, and *f(x + k)* for specific values of *k* (both positive and negative); find the value of *k* given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. *Include recognizing even and odd functions from their graphs and algebraic expressions for them.* Note: Include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types.	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary / Justification / Evidence** students are given the "how to", then asked to apply it in problem sets
Indicate the chapter(s), section(s), and/or page(s) reviewed. Sect 4.5 + activity on p. 420 "Even and Odd Functions"	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** even/odd functions are only ~~[illegible]~~ handled in an independent lab activity
	Overall Rating 

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Building Functions (F-BF)

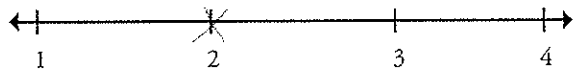
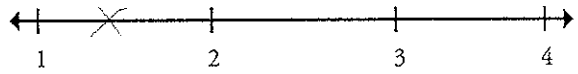
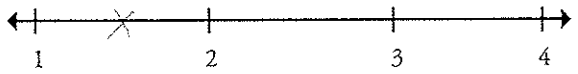
Build new functions from existing functions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-BF.4a 4. Find inverse functions. a. Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. *For example,* $f(x) = 2x^3$ *or* $f(x) = (x+1)/(x-1)$ *for* $x \neq 1$. Note: Include simple radical, rational, and exponential functions; emphasize common effect of each transformation across function types. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Sect. 4.3	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary / Justification / Evidence** Only mentioned in 1 example, I discuss, and 1 2 discrete practice problems, not developed at all. Says only "mentioned" as an inverse of the exponential **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** The strand is nearly absent and not developed at all Overall Rating 1 2 3 4

Reviewed By: _____

Title of Instructional Materials: _____

ALGEBRA II — FUNCTIONS (F)

Linear, Quadratic, and Exponential Models (F-LE)

Construct and compare linear, quadratic, and exponential models and solve problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
F-LE.4 For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.* Note: Logarithms as solutions for exponentials. **Indicate the chapter(s), section(s), and/or page(s) reviewed.** Sect 8.1-8.5 and 8.4	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships **Summary / Justification / Evidence** Not developed well and really only alluded to as a solution, use of technology is encouraged **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** This concept is passed thru as an intermediate step to get to a decimal solution Overall Rating